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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,181	06/30/2005	Shintaro Nakayama	OMOR-0011	6138

23377 7590 11/13/2006

WOODCOCK WASHBURN LLP
ONE LIBERTY PLACE, 46TH FLOOR
1650 MARKET STREET
PHILADELPHIA, PA 19103

EXAMINER	
BROOME, SAID A	

ART UNIT	PAPER NUMBER
2628	

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/541,181	NAKAYAMA ET AL.	
	Examiner	Art Unit	
	Said Broome	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 June 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/4/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 2-9, 11-16, 18-25 and 27-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In regards to claims 2-9, 11-16, 18-25 and 27-32, the definitions of the terms basic process and intermediate process are unclear. For examining purposes the term basic process has been interpreted to be a root or parent node of the tree structure, and an intermediate process has been interpreted to be a subpart or child node of the tree structure for claims 2 and 18. However, in regards to claims 3-9, 15, 16, 19-25, 31 and 32, the examiner's interpretation of the terms does not further enable the claims to be clearly understood and examined, therefore no prior art reference has been applied to the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 10-14, 17, 18 and 26-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirata et al. (herein "Hirata", US Patent 6,157,902).

Regarding claims 1 and 17, Hirata describes a computer implemented method and system for automatically generating a process animation, respectively in column 140 lines 65-66 ("...a parts selection routine 100 for selecting parts to be disassembled is executed...") and in column

13 lines 43-52 ("...an assembly arrangement...downloaded onto a floppy disk at the three-dimensional CAD system...the floppy disk thus downloaded is loaded on the assembly route producing apparatus 100 shown in FIG. 2..."). Hirata describes obtaining three-dimensional data of a product consisting of a plurality of parts in column 13 lines 39-52 ("...a three-dimensional configuration of components or parts constituting an assembly route analyzing product designed using a three-dimensional CAD system...are downloaded onto a floppy disk at the three-dimensional CAD system end, and the floppy disk thus downloaded is loaded on the assembly route producing apparatus 100 shown in FIG. 2..."). Hirata describes generating disassembly definition information for disassembling the product into parts thereof according to a user entry, and in column 24 lines 1-5 ("When the associated icon is clicked on the main menu...a sequence of a part disassembly is determined beforehand in accordance with the part tree structure as shown in FIG. 26, and the sequence of a part disassembly thus determined is displayed..."), and as illustrated in Figure 2 as elements 103 and 102 respectively, where user selection of particular parts is described that would enable selection of parts from its corresponding tree structure, or disassembly definition information as shown in Figure 27 as element 100 in which the disassembly definition information is the tree structure of parts that comprise the model, as disclosed in the applicant's Specification on page 2 lines 10-16. Hirata illustrates generating a disassembly algorithm or routine for the parts of the product according to the disassembly definition information, in Figure 5, where it is shown that the disassembly algorithm 200 is based on the parts selection routine 100, which is the that that defines the parts that comprise the model to be disassembled, as described in column 14 lines 65-67 ("...a parts selection routine 100 for selecting parts to be disassembled is executed, and then an automatic

disassembly route producing routine 200 is executed on the selected part."), as shown in Figure 27. Hirata also describes storing the disassembly algorithm in a memory, as illustrated in Figure 5, element 200 is executed in a computer system and is therefore stored in memory on the system, as described in column 13 lines 38-52 ("...data representative of a subassembly comprising combinations of parts in which an assembly arrangement is performed on a unitary basis are downloaded onto a floppy disk at the three-dimensional CAD system end, and the floppy disk thus downloaded is loaded..."). Hirata describes generating a disassembly animation of the pars of the product according to the disassembly algorithm in column 17 lines 52-55 ("FIG. 10 is a flowchart showing a routine for implementing characteristic structures shown in FIGS. 9(a), 9(b) and 9(c)."), where it is described that the animation illustrated in Figures 9a-c, are produced based on the defined disassembly algorithm or routine illustrated in Figure 10.

Regarding claims 2 and 18, Hirata describes disassembly information that defines dependency relationships among parts and group relationships among groups, and comprises a tree structure consisting of nodes and leaves, which are processes and parts, respectively, in column 21 lines 60-65 ("A product, which is designed with the use of a three-dimensional CAD system, has usually, as shown in FIG. 26, configuration data for parts and assembly arrangement information as well including a membership (indicating as to what child part is to be associated with what parent part) of the parts."), which describes a tree structure that shows the parts as well as the structural relationships required to construct the model. Though the meaning of the terms basic process and intermediate process is unclear, for examining purposes the term basic process has been interpreted to be a root or parent node of the tree structure, and an intermediate process has been interpreted to be a subpart or child node of the tree structure. Hirata illustrates each

node comprising a basic process and an intermediate process performed in the basic process in Figure 26, where the basic process or root node of the structural components, which is labeled as Part 1, is shown to comprise intermediate processes or structural assembly information of subparts or child nodes, as illustrated in Figure 26 as Parts 21, 31 and 41. Hirata also illustrates each leaves consisting of a process parts group for grouping a plurality of parts or parts groups, and the parts or parts groups in Figure 29.

Regarding claims 10 and 26, Hirata describes modifying a disassembly algorithm shown in Figure 5 with the modified algorithm shown in Figure 15, after an animation is generated, as described in column 18 lines 60-63 ("FIG. 15 is a flowchart of a portion, which is to be added to the basic routine shown in FIG. 5, of routines for implementing characteristic structures of a second assembly route..."), where it is described that after disassembly of a model is animated using a first disassembly routine shown in Figure 5, a second algorithm is then produced through modifying the algorithm with the routine shown in Figure 15, to produce a new disassembly animation that indicates the possible collision of parts, as shown in Figures 14 (a) and (b).

Regarding claims 11 and 27, Hirata describes modifying the movement animation of each process by modifying a position of the parts for each animation in column 27 lines 45-53 ("When a part to be disassembled is selected...a translation direction of the part to be disassembled and a movement thereof are inputted through a mouse operation...a collision check is performed...and the presence of occurrence of a collision is decided...when it is decided that a collision occurs...a collision occurs is displayed on the graphics screen."), where it is described that movement in the animation of the model is altered to show any collisions, as shown in Figures 14 (a) and (b).

Regarding claims 12 and 28, Hirata describes modifying the position of the parts in column 24 lines 6-9 ("...the mouse 103...is operated to pick up a part on the display screen and translate the same.").

Regarding claims 13 and 29, Hirata illustrates in Figure 37(c) modifying animations of other processes that are performed within the processes by modifying a position of each of the parts or parts groups in each of those other processes, as described in column 26 lines 30-40 ("...an operator operates the mouse 103 to bring the cursor 211 on the screen of an operation menu...on the graphics screen of FIG. 37(b) there will appear a graphics image of a product in the middle of disassembly including parts in the middle of disassembly in the state that they interfere with another part...the parts in the middle of disassembly on the graphics screen are translated, through the mouse operation, in a direction free from an occurrence."), where modification of parts, as well as the respective parts they are connect with, is performed in Figure 37 (c).

Regarding claims 14 and 30, Hirata describes that the animation may be set to several viewpoints in column 20 lines 16-22 ("...a plurality of graphics screens, which are involved in a plurality of viewpoints, respectively, are displayed on the CRT display unit 104...when the cursor of the mouse 103 shown in FIG. 2 is translated to a desired one of the plurality of graphics screens thus displayed and then the mouse 103 is clicked, the graphics screen of interest is selected...").

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Said Broome whose telephone number is (571)272-2931. The examiner can normally be reached on 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571)272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

S. Broome
10/31/06 SB

ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER